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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,908	11/03/2003	Stefan Raspl	DE920010103US1	7758
28342 7590 02/20/2007 SAMUEL A. KASSATLY LAW OFFICE 20690 VIEW OAKS WAY SAN JOSE, CA 95120			EXAMINER CHEN, TE Y	
			ART UNIT	PAPER NUMBER
			2161	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		02/20/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/700,908	<b>Applicant(s)</b> RASPL, STEFAN	
	<b>Examiner</b> Susan Y. Chen	<b>Art Unit</b> 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Jan. 08, 2007 has been entered.

This office action is in response to the amendment filed on Jan. 08, 2007.

Claims 1-26, are presented for examination; claims 1, 11 and 15-21 have been amended.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. publication No. 2002/0052692 issued to FAHY, in view of U.S. Patent No. 6,973,495 issued to Yarmus et al. (hereinafter referred as Yarmus).

Claim 1-10 and 15-26, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. publication No. 2002/0052692 issued to FAHY.

Claim 1:

FAHY discloses a method of clustering a set of records [Abstract], each of the records having attribute values for a set of attributes [e.g., the unit 200, Fig. 3 and associated texts starting at paragraph 0045 at seq.], the method comprising:

for each attribute of the set of attributes, determining a characteristic value for said each attribute, based on attribute values of said each attribute [e.g., the steps: 210-214, Fig. 3];

wherein determining the characteristic value comprises calculating the attribute values of said attribute across the records[e.g. paragraphs: 0009-0010];

for each attribute value, determining a deviation from the characteristic value of said each attribute, wherein determining the characteristic value comprises calculating the attribute values of said attribute across the records [e.g., the use of K-mean Euclidean distance technique at paragraphs: 0047-0050, Fig. 3 and associated texts];

for each record, sorting the set of attributes based on deviations of the attribute values, to provide a key [e.g., paragraphs: 0064-0065, Units: 224, 226, Fig. 3]; and

clustering the set of records based on the key into a clustering results that includes a plurality of clusters, wherein the key comprises an ordered list of the set of attributes and the deviations [e.g., paragraph 0020 & Fig. 4 and associated text starting at paragraph 0072 at seq.].

Although FAHY clearly disclosed a reduction component that configured to generate a data file of a reduced test matrix from the data file of the test matrix [e.g., paragraph: 0010], he does not specifically disclose the details of refining the clustering result by selectively changing a length of the key to change the number of the clusters.

However, Yarmus explains the details to refine the clustering result by selectively changing a length of the key to change the number of the clusters [e.g., Abstract, col. 7, lines 49-60, col. 14, line 35 - col. 16, line 7].

FAHY and Yarmus are both of the same endeavor to changing (or reducing) the clustering size of a set of records based on the K-mean clustering (or binning) processing [e.g., FAHY: Fig. 4 and associated texts; Yarmus: col. 7, lines 49-60, col. 14, line 35 - col. 16, line 7], thus, with the teachings of FAHY and Yarmus in front of him/her, it would have been obvious for an ordinary skilled person in the art at the time the invention was made to apply Yarmus's detail explanation of refining the clustering result by selectively changing a length of the key to change the number of the clusters system into FAHY's invention, because by doing so, as suggested by Yarmus, the combined invention is more completed and will provide a useful general business analysis system that requires little user input and statistical skills and still cope with a large space of potential problems whose analytic form is not known in advance [Yarmus: col. 1, lines 31 – lines 59].

Claim 2:

Art Unit: 2161

except the limitations recited in claim 1, the combined invention of FAHY and Yarmus further discloses the method comprising calculating a mean value of the attribute values of said each attribute as the characteristic value [e.g., FAHY: paragraph 0052].

Claims 3:

except the limitations recited in claim 1, the combined invention of FAHY and Yarmus further discloses a median value of the attribute values of each attribute is determined as the characteristic value [e.g., FAHY: paragraphs: 0057 & 0060].

Claims 4:

except the limitations recited in claim 1, the combined invention of FAHY and Yarmus further discloses determining the deviation comprises calculating a difference between each said attribute value and the characteristic value of each said attribute [e.g., FAHY: Abstract, lines 9-16].

Claim 5:

except the limitations recited in claim 1, the combined invention of FAHY and Yarmus further discloses determining the deviation comprises calculating a difference between said each said attribute value and the characteristic value of the corresponding attribute, and dividing the difference by the characteristic value of said each said attribute [e.g., FAHY: the "ration" column of Fig. 8, paragraph 0076].

Claim 6:

except the limitations recited in claim 1, the combined invention of FAHY and Yarmus further discloses sorting the set of attributes comprises using absolute values of the deviations of the attribute values as a sorting criterion [e.g., FAHY: paragraph 0026 & 0028].

Claim 7:

except the limitations recited in claim 1, the combined invention of FAHY and Yarmus further discloses that a first record of the set of records contains a first key and a second record of the set of records contains a second key; and further comprising placing the first key and the second key into a single cluster if the first key and the second key have identical sub-sequences of a first length [e.g., FAHY: Fig. 8 and associated texts].

Claim 8:

except the limitations recited in claim 1, the combined invention of FAHY and Yarmus further discloses that first record of the set of records contains a first key and a second record of the set of records contains a second key; and further comprising placing the first key and the second key into a single cluster if the first key and the second key have identical sub-sequences of absolute values of the deviations [e.g., FAHY: Fig. 9 and associated texts].

Claim 9:

except the limitations recited in claim 1, the combined invention of FAHY and Yarmus further discloses that a first record of the set of records contains a first key that has a first sub-sequence, and a second record has a second sub-sequence contains a second key; and further comprising placing the first key and the second key into a single cluster if the first and second sub-sequences comprise the same set of attributes [e.g., FAHY: paragraph: the single linkage agglomeration technique at 0059].

Claim 10:

except the limitations recited in claim 9, the combined invention of FAHY and Yarmus further discloses that the first and second sub-sequences comprise the same set of attributes irrespective of a sign of the deviations of the attribute values [e.g., FAHY: paragraph: 0028, Note the absolute value of an attribute is irrespective of a sing].

Claim 11:

except the limitations recited in claim 10, the combined invention of FAHY and Yarmus further discloses that: identifying a cluster having a smallest number of records [e.g., Yarmus: col. 16, line 34 – col. 17, line 6]; and for each record of the identified cluster searching another cluster having records with best matching keys [e.g., Yarmus: col. 14, lines 35-41].



Claim 12:

except the limitations recited in claim 11, the combined invention of FAHY and Yarmus further discloses reducing a length of the first sub-sequence and a length of the second sub-sequence in order to find a best match [e.g., FAHY: paragraph 0010, Yarmus: col. 14, line 35 - col. 16, line 7].

Claim 13:

except the limitations recited in claim 11, the combined invention of FAHY and Yarmus further discloses using a distance measure to find another cluster for a record of the identified cluster [e.g., FAHY: Abstract, lines 9-16, Yarmus: Abstract].

Claim 14:

except the limitations recited in claim 11, the combined invention of FAHY and Yarmus further discloses the distance measure comprises a Euclidean distance [e.g., FAHY: 0054].

Claim 15:

This claim incorporates substantially similar subject matter as claim 1 in form of computer program product, hence is rejected along the same rational.

Claim 16:

This claim incorporates substantially similar subject matter as claim 2 in form of computer program product, hence is rejected along the same rational.

Claim 17:

This claim incorporates substantially similar subject matter as claim 3 in form of computer program product, hence is rejected along the same rational.

Claim 18:

This claim incorporates substantially similar subject matter as claim 4 in form of computer program product, hence is rejected along the same rational.

Claim 19:

This claim incorporates substantially similar subject matter as claim 5 in form of computer program product, hence is rejected along the same rational.

Claim 20:

This claim incorporates substantially similar subject matter as claim 6 in form of computer program product, hence is rejected along the same rational.

As to claims 21-26, these claims recite similar subject matter as claims 1-6 and 15-20 in form of an abstract computer system, hence are rejected along the same rational.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-26, have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Poggio et al. (U.S. Patent No. 5,642,431) which discloses a network-based system and method for detection the features of a face image and the like via K-means Euclidean distance.

Etoh (U.S. Patent No. 5,519,789) which discloses image clustering apparatus via K-means Euclidean distance.

### ***Points of Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Y. Chen whose telephone number is 571-272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2161

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Susan Y Chen  
Examiner  
Art Unit 2161



February 15, 2007